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(54) Title: FUEL CELL COLLECTOR PLATES CONTAINING GRAFTED POLYOLEFINS

(57) Abstract: A conductive composition for fuel cell collector plates and the molding methods thereof are provided. The molding composition includes a polymer resin and conductive fillers, wherein the polymer resin is a polymer blend comprising (1) from about 10 to 100 wt%, preferably from about 50 to about 100 wt% of a grafted polyolefin or a blend of grafted polyolefins and (2) from 0 to about 90 wt%, preferably from about 0 to about 50 wt% of at least one other thermoplastic polymer having a melting point below 280 °C. One type of or a combination of different types of highly conductive fillers are selected from carbon, graphite, metallic fillers and mixtures thereof. The polymer resin and conductive fillers are blended into a homogeneous mixture and molded into a collector plate. A preferred method of injection molding and a preferred method of injection-compression molding are provided to mold the composition into the shape of a fuel cell collector plate having a volume resistivity of not more than about 0.1 ohm.cm. The collector plate is particularly suitable for, but not limited to, use in polymer electrolyte membrane fuel cells.

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